UNITED STATES PATENT AND TRADEMARK OFFICE

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10/651,810	08/28/2003	Avinash Jain	030159	9973

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EXAMINER
WONG, BLANCHE

ART UNIT	PAPER NUMBER
2476	

NOTIFICATION DATE	DELIVERY MODE
01/14/2010	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *23 October 2009*.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *2-19,21-23 and 25-37* is/are pending in the application.

  4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *18,22,34 and 36* is/are allowed.

6)☒ Claim(s) *2-17,21,23-33,35 and 37* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

  Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

  Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

  a)☐ All   b)☐ Some *   c)☐ None of:

  1.☐ Certified copies of the priority documents have been received.

  2.☐ Certified copies of the priority documents have been received in Application No. _____.

  3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

  * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3)☐ Information Disclosure Statement(s) (PTO/SB/08)
  Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
  Paper No(s)/Mail Date. _____.
5)☐ Notice of Informal Patent Application
6)☐ Other: _____.

DETAILED ACTION

Response to Arguments

1.   Applicant's arguments filed October 23, 2009 have been fully considered but they

are not persuasive.

2.   To begin, Applicants restate their "issues" with Examiner's prior art references,

and fails to address Examiner's Response to Arguments dated August 14, 2009.

Herein, Examiner is responding to similar issues, and accordingly, repeating parts of the

Response to Arguments where they apply.

3.   Applicants state "Therefore, Pankaj is not seen to disclose the feature of

transmitting a request for a rate if data arrives in a buffer, data in the buffer exceeds a

buffer depth, and sufficient power exists to transmit at the rate requested." Remarks,

p.9, lines 7-9. Applicants made a similar statement in the Amendment dated May 22,

2009. In the latter, Applicants state "transmitting a request for a rate based on a carrier-

to-interference ratio cannot reasonably be said to be 'transmitting a request for a rate if

data arrives in a buffer, data in the buffer exceeds a buffer depth, and sufficient power

exists to transmit at the rate requested'." Remark, p.12, lines 3-6. Here is Examiner's

Response to Arguments to the latter dated May 22, 2009, as it also applies to

Applicants' statement in the most recent Amendment dated October 23, 2009:

"However, Examiner respectfully disagrees. Applicant reviewed Examiner's support

found in Pankaj, col. 5, lines 28-35. Applicant's review indicates that "[t]he access

terminal 126 determines the data rate based on the quality of the channel ..., for

instance, through use of a carrier-to-interference ratio", Remark, p.11, lines 17-18, and

"[t]he AT 126 then generates a DRC value; the DRC value is transmitted to the AN 122

to request a data transmission", Remark, p.11, line 21-p.12, line 2. Therefore,

"transmitting a request for a rate" is found in Pankaj. Even if support is unfound for

"transmitting a request for a rate", Applicant has not address Examiner's support that

includes Pankaj, col. 6, lines 19-20 and 32. Furthermore, even if Applicant has address

Examiner's support, Applicant further states that "[t]he data request specifies the data

rate at which the data is to be sent, the length of the data packet to be transmitted, and

the sector from which the data is to be sent." Remark, p.11, lines 15-17. This limitation

is unfound in the claim language."

4.   In response to applicant's argument that the references fail to show certain

features of applicant's invention, it is noted that the features upon which applicant relies

(i.e., the data request specifies the data rate at which the data is to be sent, the length

of the data packet to be transmitted, and the sector from which the data is to be sent)

are not recited in the rejected claim(s). Although the claims are interpreted in light of

the specification, limitations from the specification are not read into the claims. See *In

re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

5.   Moreover, Applicant states "Malmlof does not teach or suggest using the amount

of data in the transmission buffer as a condition for determining whether to transmit a

request for a rate", Remark, p.10, lines 5-6. Applicants made a similar statement in the

Amendment dated May 22, 2009. In the latter, Applicants state "the present invention

teaches monitoring a buffer to control transmission of a request for a rate". Here is

Examiner's Response to Arguments to the latter dated May 22, 2009, as it also applies

to Applicants' statement in the most recent Amendment dated October 23, 2009:

"However, Examiner respectfully disagrees. [Such a] limitation is unfound in the claim

language."

6.   In response to applicant's argument that the references fail to show certain

features of applicant's invention, it is noted that the features upon which applicant relies

(i.e., monitoring a buffer to control transmission of a request for a rate) are not recited in

the rejected claim(s). Although the claims are interpreted in light of the specification,

limitations from the specification are not read into the claims. See *In re Van Geuns*, 988

F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

7.   Applicants are asking for reconsideration of limitations above whereas Examiner

is asking what is the invention, e.g. whether it is " the data request specifies the data

rate at which the data is to be sent, the length of the data packet to be transmitted, and

the sector from which the data is to be sent" or "monitoring a buffer to control

transmission of a request for a rate". That is, do these limitations tell the invention?

Perhaps, if Applicants have addressed Examiner's Response to Arguments dated

August 14, 2009, that would shed light as to what is the invention and its limitations.

8.   Applicant's arguments do not comply with 37 CFR 1.111(c) because they do not

clearly point out the patentable novelty which he or she thinks the claims present in view

of the state of the art disclosed by the references cited or the objections made. Further,

they do not show how the amendments avoid such references or objections.

Claim Rejections - 35 USC § 103

9.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

10.   **Claims 17,19,21** are rejected under 35 U.S.C. 103(a) as being unpatentable over

Pankaj (U.S. Pat No. 6,807,426) in view of Malmlof (U.S. Pat No. 6,594,241).

With regard to claims 17,19,21, Pankaj discloses a method, an apparatus and a

computer-readable medium comprising:

transmitting a request **(requests for data transmission, col. 5, line 37)** for a

rate **("a data request specifies the data rate at which the data is to be sent, the**

length of the data packet transmitted...", col. 5, lines 29-31) if data arrives in a

buffer, data in the buffer exceeds a buffer depth **(based upon the remote station's**

associated instantaneous rate for receiving data, col. 6, lines 19-20)(*See Also* data

queue for transmission, col. 6, line 32) (store and forward), and sufficient power

(quality) exists to transmit at the rate requested **(the data rate based on the quality of**

the channel, col. 5, lines 32-33);

receiving a rate assignment responsive to the request for the rate **(a channel is**

established), the rate assignment indicating a scheduled duration and a scheduled rate

applicable for the scheduled duration **(a channel is defined as the set of**

communication links ... within a given frequency assignment, col. 5, lines 22-25)

(See Also Forward Link and Reverse Link, col. 5, lines 25-26); and

transmitting data **(data is transmitted/transmitting)**, the transmitting responsive to the rate assignment, wherein the data is transmitted for the scheduled duration at the scheduled rate **("The channel scheduler 812 schedules the variable rate transmissions on the forward link. ... The channel scheduler 812 preferably schedules data transmissions to achieve the system goal of maximum data throughput ...", col. 9, lines 11-18)**.

Applicant has previously stated that Pankaj fails to explicitly show the data in the buffer exceeds a buffer depth.

In an analogous art of data transmission, Malmlof discloses the data in the buffer exceeds a buffer depth **("to monitor the amount of data currently being stored in a transmission buffer", col. 2, liens 59-61)**.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine "the data in the buffer exceeds a buffer depth" as taught by Malmlof, with receiving data as taught in Pankaj, for the benefit of maximizing resources. Malmlof, col. 2, line 58-col. 3, line 4.

11.   **Claims 2-15,35 and 37** are rejected under 35 U.S.C. 103(a) as being unpatentable over Pankaj and Malmlof as applied to claim 17,19,21 above, and further in view of Chen.

With regard to claim 2, the combination of Pankaj and Malmlof disclose the method of claim 17.

Pankaj and Malmlof fail to explicitly show scheduling period that is variable.

In an analogous art of scheduling, Chen discloses scheduling period that is variable (**"the concept of a single variable rate channel, or multiple channels having a fixed rate, or a combination of variable and fixed rate channels, is within the scope of the present invention", para. [0056])**.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine "scheduling period that is variable" as taught by Chen, with the scheduling as taught by Pankaj and Malmlof, for the benefit of simple substitution of one known element for another to obtain predictable results. *KSR*.

With regard to claim 3, the combination of Pankaj and Malmlof disclose the method of claim 17.

The combination fails to explicitly show the schedule duration is less than or equal to a scheduling period, the scheduling period being an interval of time after transmission of the rate assignment.

Official notice is taken that the limitation the schedule duration is less than or equal to a scheduling period, the scheduling period being an interval of time after transmission of the rate assignment is well-known because data transmission is not possible and probable when the schedule duration is greater than the schedule period.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine "the schedule duration is less than or equal to a scheduling period, the scheduling period being an interval of time after transmission of the rate assignment is well-known because data transmission is not possible and probable when the schedule duration is greater than the schedule period", with the scheduling as taught by Pankaj and Malmlof, for the benefit of minimizing bottleneck or overflowing that causes loss of transmission and thus improving transmission quality.

With regard to claim 4, the combination of Pankaj and Malmlof discloses the method of claim 3.

Pankaj and Malmlof fail to explicitly show scheduling period that is variable.

In an analogous art of scheduling, Chen discloses scheduling period that is variable (**"the concept of a single variable rate channel, or multiple channels having a fixed rate, or a combination of variable and fixed rate channels, is within the scope of the present invention", para. [0056]**).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine "scheduling period that is variable" as taught by Chen, with the scheduling as taught by Pankaj and Malmlof, for the benefit of simple substitution of one known element for another to obtain predictable results. *KSR*.

With regard to claim 5, the combination of Pankaj and Malmlof discloses the method of claim 3.

Pankaj and Malmlof fail to explicitly show scheduling duration that is variable.

In an analogous art of scheduling, Chen discloses scheduling period that is variable **("the concept of a single variable rate channel, or multiple channels having a fixed rate, or a combination of variable and fixed rate channels, is within the scope of the present invention", para. [0056])**.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine "scheduling period that is variable" as taught by Chen, with the scheduling as taught by Pankaj and Malmlof, for the benefit of simple substitution of one known element for another to obtain predictable results. *KSR*.

With regard to claim 6, Pankaj further discloses schedule rate that is variable **("The channel scheduler 812 schedules the variable rate transmissions on the forward link. ... The channel scheduler 812 preferably schedules data transmissions to achieve the system goal of maximum data throughput ...", col. 9, lines 11-18)**.

With regard to claim 7, the combination of Pankaj, Malmlof and Chen discloses the method of claim 5.

Pankaj and Malmlof fail to explicitly show priority of a station.

Chen further discloses priority of a station **("priority of subscriber stations", para. [0055])**.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine "priority of a station" as taught by Chen, with the method as taught by Pankaj and Malmlof, for the benefit of use of known technique to improve similar devices (methods, or products) in the same way, such as having a determinant way of resolving scheduling conflicts. *KSR*.

With regard to claims 8 and 9, the combination of Pankaj, Malmlof and Chen discloses the method of claim 5.

Pankaj and Malmlof fail to explicitly show maximum supportable rate.

Chen further discloses maximum supportable rate **(maximum transmission rate) ("the scheduling information may comprise a maximum transmission rate and time instance", para. [0056])**.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine "maximum supportable rate" as taught by Chen, with the method as taught by Pankaj and Malmlof, for the benefit of use of known technique to improve similar devices (methods, or products) in the same way, such as having a determinant way of resolving scheduling conflicts. *KSR*.

With regard to claims 10 and 12, the combination of Pankaj, Malmlof and Chen discloses the method of claims 5 and 7 respectively.

Pankaj and Chen fail to explicitly show an estimate of amount of data in the buffer.

Malmlof further discloses an estimate of amount of data in the buffer **("to monitor the amount of data currently being stored in a transmission buffer", col. 2, liens 59-61)**.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine "an estimate of amount of data in the buffer" as taught by Malmlof, with the method as taught by Pankaj and Chen, for the benefit of applying a known technique to a known device (method, or product) ready for improvement to yield predictable results. *KSR.*

With regard to claim 11, the combination of Pankaj, Malmlof and Chen discloses the method of claim 7.

Pankaj and Malmlof fail to explicitly show channel condition.

Chen further discloses channel condition **("transmit power" "the listing of base stations with which the subscriber station can communicate", etc. para. [0055])**.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine "channel condition" as taught by Chen, with Pankaj and Malmlof, for the benefit of applying a known technique to a known device (method, or product) ready for improvement to yield predictable results. *KSR.*

With regard to claim 13, Pankaj further discloses rate requested **(requests for data transmission, col. 5, line 37)**.

With regard to claim 14, Pankaj further discloses an allocated throughput (throughput) (**"The channel scheduler 812 schedules the variable rate transmissions on the forward link. ... The channel scheduler 812 preferably schedules data transmissions to achieve the system goal of maximum data throughput ...", col. 9, lines 11-18**).

With regard to claim 15, the combination of Pankaj, Malmlof and Chen discloses the method of claim 7.

Pankaj and Malmlof fail to explicitly show a mobile station.

Chen further discloses a mobile station **(subscriber stations 106, para. [0035])**.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine "a mobile station" as taught by Chen, with Pankaj and Malmlof, for the benefit of executing the method of claim 17.

With regard to claims 35 and 37, the combination of Pankaj and Malmlof discloses the method of claim 17.

Pankaj and Malmlof fail to explicitly show a controller, an antenna, a transmitter, a receiver.

In an analogous art of scheduling, Chen discloses

a controller **(controller 110, para. [0038])**;

an antenna **(subscriber stations 106, para. [0035])**;

a transmitter **(subscriber stations 106, para. [0035])**; and

a receiver **(subscriber stations 106, para. [0035])**

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine "a controller, an antenna, a transmitter, a receiver" as taught by Chen, with Pankaj and Malmlof, for the benefit of executing the method of claim 17.

Allowable Subject Matter

12.   **Claims 18,22,34,36** are allowed.

13.   The following is a statement of reasons for the indication of allowable subject matter:

With regard to claims 16,18,22,34,36, the prior art of record fails to anticipate or make obvious "receiving a rate request during a scheduling period; transmitting a rate assignment responsive to the rate request, the rate assignment indicate a scheduled duration and a scheduled rate ... wherein the scheduled rate determines how many minimum scheduled durations are in the scheduling duration; and receiving data during a minimum scheduled duration at the scheduled rate, wherein each minimum scheduled duration is less than or equal to the scheduling period, the scheduling period being an interval of time after transmission of the rate assignment and before the transmission of the next rate assignment."

Conclusion

14.   **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

15.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to BLANCHE WONG whose telephone number is (571)272-3177. The examiner can normally be reached on Monday through Friday, 830am to 530pm.

        If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ayaz Sheikh can be reached on 571-272-3795. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

        Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Blanche Wong/
Examiner, Art Unit 2476
January 6, 2010
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